

Ashesi University College

Effect of Corporate Governance on the Outcome of Corporate Investment Decisions in
Ghana

By

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DECLARATION

I hereby declare that this thesis is my original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: _____.

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I hereby declare that the preparation and presentation of this thesis was supervised in accordance with the guidelines on supervision of theses established by Ashesi University College

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ABSTRACT

This study examines the effects that Corporate Governance has on the outcome of Corporate Investment Decisions of Ghanaian Companies.

This research is conducted on 19 Ghanaian companies sub-divided into Multinational and local Companies. Multiple regression analysis is used in this study in estimating the relationship between corporate governance characteristics and the outcome of investing decisions. The independent variables used which are Firm Size, Board Size, Board Independence, CEO Duality, Size of Audit Committee and the Independence of Audit Committee; represent the measure of corporate governance for this study. The results of this study show that for all 19 Ghanaian Firms, the Board Size, Board Independence and Size of Audit Committee are variables relevant in making sound investing decisions whose benefits companies can enjoy over a number of years. For multinationals, Board Independence, the Size of Audit Committee and the Independence of Audit Committee have positive relationships with investing decisions while for local companies the Board Size, Board Independence and the Independence of the Audit Committee are the variables having a positive relationship with the outcome of investment decisions.

This paper adds to the limited evidence on the governance-performance relationship that exists in Ghana but approaches the topic by focusing mainly on the outcome of investing decisions (capital budgeting decisions). This study can inform governance policy making in Ghana.

Keywords: Investment Decisions, Corporate Governance, Multiple Regression and Firm Performance.

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CHAPTER 1: INTRODUCTION

1.1 Background to the Study

The study and development of Corporate Governance began earnestly in developed economies like France, Germany, United States and the United Kingdom (Herrigel, 2007). Due to increased industrialization, firms grew larger and larger making the classical entrepreneurial systems of owner-manager give way to a more dispersed system. Hence, the creation of the system of ownership separated from management. The separation of ownership from management gives rise to the 'agency problem'. Every organization whether or not management is separated from ownership must be governed well for the organization to achieve the strategic and operational goals the organization was incorporated to achieve.

Currently, in Africa, corporate governance has been widely accepted as it has implications for economic development and long-term growth (Okeahalem and Akinboade, 2003). For instance, a survey was conducted in 2000 by the Institute of Directors (IOD) for top 100 companies and some state-owned enterprises to investigate the current state of corporate governance practices in both the private and public sectors. The survey revealed that corporate governance practice had gained grounds in Ghana and several sub-Saharan countries (Okeahalem and akinboade, 2003). Developing countries vary from developed countries in many ways and as such, there is the need for developing countries to develop their own corporate governance models that consider the cultural, political, and technological changes in each African country (Mulili and Wong, 2011).

Modigliani and Miller (1958) “think of firms as collections of investment projects”. Two important decisions taken by the financial managers are the financing decisions and capital budgeting or investing decisions. According to Cooremans, (2009), capital budgeting decisions increases a firm's economic capacity and financial value and is equally and sometimes even more important than the financing measures a company adopts. Financial managers are constantly faced with the decision of how to allocate scarce corporate resources of a company in a governance system and environment that is increasingly placing pressure on them (Waddock and Graves, 1997).

The pursuit to provide answers to issues that improve firm performance in Ghana is still an ongoing process with volumes of literature written around the subject (Fiador, 2016).

The factors according to research that affect firm performance range from macroeconomic factors to industry level factors, through to firm level factors (Fiador, 2016). At the firm level, a factor central to the success or failure of a company is the firm’s investing decisions. An example of a successful outcome of an investing or capital budgeting decision was the development of the 757 and 767 jets by Boeing which increased stockholders investment by more than double and by the year 2002 the estimated cumulative profit for this investment project was estimated at \$10 billion.

Capital budgeting failures like that of Iridium Communications can have unfortunate consequences on the existence of an organization. A \$5 billion investment in a satellite system saw the company filing for bankruptcy in less than a year (YouSigma, 2008).

From the Iridium Communications example, the importance of the outcome of investing decisions is shown as they can affect the operations and the continued existence of an organization. Therefore, beyond governance systems, it is necessary to investigate the

possible returns or outcomes of a capital budgeting decision before implementation.

Popular methods of valuing the feasibility of capital budgeting projects include the Net Present Value, Discounted Cash Flows, Payback Period, Internal rate of Return and the Profitability Index. These project appraisal techniques do not only assess the financial returns of an investment project for a company but also the viability and feasibility.

Corporate governance failures also come with their own repercussions on a firm.

Scandals such as those of Enron and WorldCom are attributed to poor corporate governance and the failure to consider stakeholder concerns in decisions (Mulili and Wong, 2011). The more current corporate governance failures in Africa are the Saanbou Bank, Fidentia (accaglobal.com, 2016) and First Strut (Wet, 2013). Following these scandals, many governments have set up new regulations to align the interests of stakeholders with corporate conduct (Wulili and Wong, 2011).

This study makes a contribution to the debate on the impact of corporate governance on firm performance particularly the outcome of a capital budgeting decision in a developing economy as Ghana's. The concept of corporate governance and capital budgeting decisions are necessary areas of study that require much needed attention from financial managers and corporate managers. Their implications on the success and profitability of companies worldwide can be costly or beneficial. Many studies in Africa relate corporate governance with company performance and the investors' decision to invest in a company (Mulili and Wong, 2011). This paper, however, does differently by focusing on corporate governance systems and how they influence the outcome investing decisions in Ghana.

1.2 Research Problem

Many notable scholarly articles written on the topic of corporate governance in Ghana establish the relationship between corporate governance and financing decisions (Abor, 2007), corporate governance and disclosure practices (Aboagye-Otchere, Bedi and Ossei Kwakye, 2012), corporate governance and financial performance (Kyereboah-Kyereboah-Coleman and Biekpe, 2006) among others. The different direction this study is taking is from the perspective of investing or capital budgeting decisions. According to Swain and Haka, (2000) “Capital Investment decisions is an activity that is crucial to future organizational variability, as indicated by the high level of time and resources typically committed by companies to the capital investment process.” Moreover, Myers, (1974) argues that there is a significant interaction between corporate financing and investment decisions and while the study by Abor, (2007) addresses Corporate Governance and Financing decisions, no study exists for investing decisions in Ghana.

Also, the study by Kyereboah-Coleman, (2008) looked at governance and firm performance based on the various industry sectors in Ghana. However, there has not been any empirical study that divides the companies based on their firm size. The literary gap, therefore, is that no known empirical study discusses corporate governance and the outcome of capital budgeting decisions in one paper. Furthermore, another literary gap exists as governance studies have failed to categorize sample companies according to their firm size. A perspective from Lozano and Boni (2002) identifies that multinational enterprises have continued to grow and increase worldwide and have a clear competitive advantage over local companies. The size of a company is also known to influence the capital budgeting process and the firm’s performance as a whole (Pike, 1987).

1.3 Research Objectives

- To determine if there is a relationship between the factors of corporate governance and the outcome of investing decisions companies take.
- To examine the different factors of corporate governance that may influence the outcome of investing decisions of multinationals as well as local companies.

1.4 Theoretical Framework

Various theories were propounded by many researchers to explain the reason why corporate governance may have an effect on the outcome of decisions made by managers. The theory for this research paper is the “Theory of Separation of Ownership and Control” by Fama and Jensen (1983). This theory explains the need to have a management separate from shareholders and to have a board of directors serving as a control mechanism. "Control of agency problems in the decision-making process is important when the decision managers who initiate and implement important decisions are not the major residual claimants and therefore do not bear a major share of the wealth effects of their decisions” (Fama and Jensen, 1983). The hypothesis of the theory suggests that for large corporations and large professional partnerships etc., the control of the agency problem is done by having a separate body that takes up the ratification and monitoring of decisions taken on behalf of the residual claimants by management (Fama and Jensen, 1983). This theory explains the nature of companies used in this study. The companies in this study have a management that makes decisions on behalf of shareholders while having the board of directors as the control mechanism. The Board, therefore, have the right to hire and fire and compensate top-level decision makers to

ensure that decisions (whether financial or investing decisions) made by managers are in the best interest of corporations. The Theory also explains the importance and function of Non-Executive Directors on the Board. The theory states that;

“Corporate boards generally include outside members, that is, members who are not internal managers, and they often hold a majority of seats. The outside board members act as arbiters in disagreements among internal managers and carry out tasks that involve serious agency problems between internal managers and residual claimants, for example, setting executive compensation or searching for replacements for top managers” (Fama and Jensen 1983).

1.5 Research Hypothesis

The basis for the hypothesis is the “Theory of Separation, Ownership and Control” by Fama and Jensen (1983) whose core proposition is that a good and effective governance system of a firm is one where ownership is separated from management and there is an efficient control mechanism representing the Board of Directors (Fama and Jensen, 1983). Once this theory exists in a corporation, managers are expected to make good decisions (whether financing or investing decisions) to create wealth for the shareholders of the corporation.

As such the direction of the hypotheses of the various governance factors of this study vary based on the suggested effects the “Theory of Separation of Ownership and Control” by Fama and Jensen (1983) suggests. The principal hypothesis of this research is stated below;

HO = Corporate Governance has no positive significant effect on the outcome of capital budgeting decisions.

HA = Corporate Governance has a positive significant effect on the outcome of capital budgeting decisions.

The Individual Alternate Hypotheses for the independent variables are as follows;

Firm Size - The common apex of the decision control systems of organizations, large and small are the Board of Directors. They are the mechanism that allows separation of the management and control of the organization's most important decisions (Fama and Jensen, 1983). The Theory does not explicit explain the role of Firm Size in relations to efficient decision making. Firm Size is serving as a control variable and its Alternate Hypothesis is;

HA = Firm Size is positively related to the outcome of investing decisions.

Board Size - Even though the “Theory of Separation of Ownership and Control” by Fama and Jensen (1983) discusses extensively the control function of the Board in an organization, the theory fails to discuss how the size of the board can aid in their control functions. Hence the alternate hypothesis for the Board Size is;

HA = Board Size is negatively related to the outcome of investing decisions.

Board Independence - “The board is not an effective device for decision control unless it limits the decision discretion of individual top managers” (Fama and Jensen, 1983). Per this statement, the Alternate Hypothesis for Board Independence is;

HA = Board Independence is positively related to the outcome of investing decisions.

CEO Duality - “We contend that separation of decision and risk-bearing functions survives in organizations is in part because of the benefits of specialization of management and risk bearing” (Fama and Jensen, 1983). From the above quote, the theory focuses on the separation of ownership from management and control and not necessarily the separation of chairmanship from directorship as the concept of CEO duality explains. Hence, the Alternate Hypothesis for CEO Duality is;

HA = CEO Duality is negatively related to the outcome of investing decisions.

Size of Audit Committee - “In complex organizations valuable specific knowledge relevant to decision control is diffused among many internal agents. This generally means that efficient decision control, like efficient decision management, involves delegation and diffusion of decision control as well as separation of decision management and control at different levels of the organization” (Fama and Jensen, 1983). Since the Audit Committee is a decision control mechanism at a different level of an organization, the alternate Hypothesis for the size of the Audit Committee is;

HA = Size of the Audit Committee is positively related to the outcome of investing decisions.

Independence of Audit Committee - “Corporate boards generally include outside members, that is, members who are not internal managers, and they often hold a majority of seats. Our hypothesis is that outside directors (NEDs) have the incentive to develop reputations as experts in decision control” (Fama and Jensen, 1983). As per this statement from the theory, the Alternate hypothesis for Independence of the Audit Committee is;

HA = Independence of the Audit Committee is positively related to the outcome of investing decisions.

1.6 Overview of Methodology

This study uses quantitative methods in analyzing the topic and relies solely on secondary data.

The population for this research is all companies operating in Ghana with a sample size of 19 companies consisting of 10 local and 9 multinational companies. Data for the quantitative analysis was obtained from the financial statements of the companies over 5 years (2011-2015). A panel regression was used to analyze the relationship between corporate governance and investing decisions. The independent variables which represent measures of corporate governance for this study are Board Size, Firm Size, Board Independence, CEO Duality, Size of Audit Committee and Independence of Audit Committee (Abor, 2007), (Kyereboah-Coleman, 2008). The method of company selection was done by Convenience sampling. Convenience sampling was used to avoid the difficulty in obtaining financial statements of companies that had complicated bureaucratic processes.

1.7 Significance of the Study

The main incentive for this study was the literary gap that existed in the study of corporate governance and investing decisions in Africa. This study is the first known in Ghana to examine the relationship corporate governance has on investing decisions. Mukherjee and Henderson (1987) highlight the need to simultaneously study capital

budgeting with corporate governance issues by asserting that “to understand what businesses do in capital budgeting, we must better understand the dynamics of corporate interactions” (Mukherjee and Henderson, 1987). Despite this 1987 statement no research has been done in that regard.

The contribution of capital budgeting decisions to overall performance cannot be overlooked. With a better insight on the outcome of investing decisions, managers are more likely invest in more value maximizing projects and be more efficient in their operations in the short-run (Love, 2011). Also, fewer assets will not be wasted on non-productive activities and investors are better protected and bear a less risk of losing their assets. Finally, the availability of external finance may be improved allowing firms to undertake an increased number of profitable growth opportunities (love, 2011).

The findings of this study provide unique insights and are relevant to corporate policy-making and address the literary gap in Ghanaian corporate studies. It is important that corporate Ghana has a clear and insightful view of the critical governance factors and how it can influence investing decisions, as investing decisions have serious implications for firms’ financial performance.

1.8 Outlook of Thesis Report

This paper follows a five chapter format. The first chapter captures the background of the study, the research problem, the research hypothesis, research objectives, and the significance of the study and finally the overview of methodology. The second chapter is basically a review of literature broken down into sub-topics to allow a comprehensive review of material relevant to this study. The third chapter is a review of methods used to

analyze the data gathered. It discusses extensively the methods used by similar studies, explains the relevant variables, and clearly defines the scope of the entire data.

The fourth chapter focuses on the analysis of the project. The chapter presents the findings obtained after methods discussed in the third chapter was used and supports findings with relevant literature. The fifth and final chapter is a final discussion of the summarized results from the fourth chapter; the conclusions, observations and limitations. The final chapter as makes recommendations for further studies.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this section, the theory that underlines this research paper is reviewed, providing a range of empirical studies that supports or disagrees with the theory. The second part of this chapter discusses the African and Ghanaian Corporate Governance environment at length. The final sections of this chapter fundamentally focus on the empirical studies on Corporate Governance and Firm Performance and the possible association between Corporate Governance and investing or capital budgeting decisions. It also reviews the results of such empirical studies.

2.2 Theoretical Literature

The study titled “Separation of ownership and control for board composition” by He and Sommer (2010) validates Fama and Jensen (1983)’s theory of separation of ownership and control (Fama and Jensen, 1983). The paper states that firms that adopt a body of external directors (directors who are not owners of the firm) yield efficiency in the decision-making process as the external board of directors monitor the operations of the firm (He and Sommer, 2010). This is because the adoption of more external directors increases the gap between ownership and control and allows managers to have independence in their decision-making process. Williamson (1983) is of the view that the theory by Fama and Jensen (1983) further advances the discourse on how corporations should be managed especially as they become larger in size. His argument also falls in line with the theory proposed by Fama and Jensen (1983) and rationalizes the assertion that firm size plays an important role in the need for separation of functions and roles in a

company. The better the understanding of the ramifications of ownership and control, the better various bodies of a corporation understand and develop better ways of making decisions which are in the interests of all stakeholders in the organization (Williamson, 1983). However, it must be noted that the cost to the theory of separation and ownership is the agency problem. Though Fama and Jensen (1983) put forth the theory of separation of ownership and control as the best foundations for good corporation governance, it is also important that there is an incentives system put in place to ensure that managers work to increase value maximization (Williamson, 1983). Jensen and Meckling (1976) state that this incentive is expected to motivate agents' efforts to create a total surplus. As such it is not enough to separate ownership, from management and control (Board of Directors); institutions must be put in place to ensure that the agency problem does not become malignant (Jensen and Meckling, 1970).

2.3 African and Ghanaian Corporate Governance Environment

Most empirical researches done on corporate governance were done on highly industrialized and developed countries around the world. However, there is so much evolving around corporate governance in Africa that requires attention. Oman et al. (2004) and Allen (2005) argue that corporate governance in emerging markets has lately attracted much attention due to the weaknesses of corporate governance in developing countries, which was an important reason for a series of economic crises that have affected Africa. These economic crises are attributed to multitudes of problems facing many developing economies including issues of political instability, corruption, weak legislation, high levels of government intervention among others (Marashdeh, 2014). Aside from these problems, it is imperative that developing economies work on more

firm-specific challenges such as ineffective disclosure practices, weak legal frameworks, and the value transfer from non-controlling shareholders and stakeholders to dominate large shareholders as put forth by Nenova (2009), (Rabelo and Vasconcelos, 2002).

Corporate governance has implications for economic development especially for developing countries that are interested in increasing financial capital inflows and attaining a long term growth rate of 7 percent per annum in accordance with the framework of the New Partnership for Africa's Development (NEPAD) (Okeahalem and akinboade, 2003). “In 2000, the Institute of Directors (IOD) in Ghana conducted a survey of top 100 companies and some state-owned enterprises to investigate the current state of corporate governance practices in both the private and public sectors.” The results revealed that corporate governance has gained grounds in the country (Okeahalem and akinboade, 2003).

According to Owusu and Weir, (2015) corporate governance development in Ghana can be attributed to the Ghanaian Companies Code 1963 and the supervision of the Securities and Exchange Commission Ghana (SEC) of firms listed on the stock exchange.

2.4 Corporate Governance and Firm Performance

In a study to find factors associated with firm performance, Brown and Caylor (2004) found a positive relationship between governance and performance after a 306 factor-performance combination study. Among the measures of performance were return on equity, profit margin and sales growth by which a conclusion was drawn that good governance (based on factors) is related to good performance the vast majority of the time (Brown and Caylor, 2004). In more recent studies, Fooladi and Nikzad (2011) who

also adopted measures of return on equity and return on assets in investigating the relationship between corporate governance and performance found a negative relationship between performance and CEO duality. However, despite finding positive relationships between performance and board independence, board size and ownership structure there was no significance to firm performance.

Further studies on corporate governance have also looked at the topic in emerging markets and according to Klapper and Love (2004), there are many factors of corporate governance that can affect firm performance in emerging markets but not all of them are significant. However, their studies have shown that an increase in board size leads to a better performance when there is more diversity (Klapper and Love, 2004) but not necessarily the independence of the board. Hassan Che Haat et al, (2008) in a similar statement with more reference on the independence of the directors on the board indicates that having more outside independent directors on the board improves firm performance.

Empirical evidence on emerging markets found a negative relationship between board independence and firm performance which is in contrast to the findings by Fooladi and Nikzad (2011) who found a positive relationship from their study in developed economies. The negative relationship in Klapper and Love's (2004) study is attributed to the fact that board independence is a new phenomenon in emerging economies and countries are yet to fully embrace the concept. Hassan Che Haat et al, (2008) in their study concluded that corporate governance factors generally have a strong relationship in predicting company performance in Malaysian companies. These studies on emerging markets were done in countries such as India and Malaysia implying that there might be a contextual difference in an emerging market such as Africa or that the issue of corporate

governance and its effects on firm performance and other performance factors might differ from country to country. A study in the emerging market Africa with data drawn from listed firms from Ghana, South Africa, Nigeria and Kenya over a period of 5 years showed that large and independent boards, CEO tenure, size and frequency of audit committee and sector characteristics have a positive relationship on performance with board activity intensity and CEO duality having a negative relationship (Kyereboah-Coleman, 2008). This is in line with other research where CEO duality and large and independent board size have a negative (Fooladi and Nikzad, 2011) and positive (Hassan Che Haat et al, 2008) relationship on board performance respectively. Kyereboah-Coleman (2008)'s recommendation is to separate board chair from the CEO position and have an independent audit committee to improve performance. The resulting conclusion is that governance factors vary from study to study and is not necessarily based on whether or not the study was done in an emerging market or on a more developed economy. Thus, a contextual study is very important for issues on governance and firm performance.

More recent empirical research on corporate governance and firm performance in Ghana provides a better insight on the governance factors that have a good relationship with performance. Owusu and Weir (2016) conducted a study on corporate governance and performance using the governance index of Ghana as well as other governance factors as the independent variables. The governance factors were used as the independent control variables and results disclosed that compliance of firm with the Ghanaian code is positively and significantly related to firm performance (Owusu and Weir 2016). Owusu and Weir's (2016) results send an important signal to foreign investors that Ghana does

have a good framework for governance which attracts more investment opportunities worldwide particularly since it relates to firms on the Ghana Stock Exchange (Owusu and Weir, 2016). Another study of the effects of corporate governance influence on working capital management by Ghanaian listed firms by Fiador, (2016) found that governance structure does affect the efficiency of working capital management which is also an important factor in firm performance. Also, a firm's characteristics such as its age, size and profitability affect its overall performance.

Other studies have looked at the quality of firms' governance systems as a result of the wake of corporate scandals questioning the practices of governance systems. A study by Ertugrul and Hedge (2009), states that there are very few metrics that can adequately measure how corporate governance can affect a firm's performance. Despite attempts by corporate analysts to find viable measures that will rate the effectiveness of corporate governance on a firm's performance, Ertugrul and Hedge (2009) find that there is very little significant relationship between the ratings found and adopted and firms' performance

2.4.1 Corporate Governance and Investing/Capital Budgeting Decisions

The main established goal of capital budgeting is to maximize the economic wealth of owners of the firm (Pike, 1984). Board involvement in capital budgeting decision can, therefore, be described as the partaking of board members in the decision to undertake a long-term project whose profitability can be measured using Return on Assets or Return on Investment (Mukherjee and Henderson, 1987). Also, according to Judge and Zeithaml (1992), one of the major reasons for involvement of boards in strategic decision making

is the increasing pressure for accountability. Aside from this, Weidenbaum (1985) has argued that boards' involvement in strategic decision making is a defense against corporate raiders. To further support the assertion that boards and corporate governance systems are increasingly involved in strategic decisions, evidence provided by Heidrick and Struggles (1990) reports that directors are more and more involved in the monitoring and determination of the decisions that firms make. The issue of board involvement in strategic decision is considered a very complex corporate process that no one theoretical framework can adequately capture (Judge and Zeithaml, 1992). Pike (1984) examines the relationship between capital budgeting and corporate performance and states "that any attempt to measure the performance of capital budgeting outside of the corporate level becomes a subjective study and lacks the need for relevance" (Pike, 1984).

The composition of a corporate governance system is very important in analyzing its relationship with capital budgeting decisions. Board involvement is defined by Judge and Zeithaml (1992) as "the overall level of participation of the board members in making non-routine, organization-wide resource allocation decisions that affect the long-term performance of an organization". The participation of the board in decision making is usually necessitated by dissatisfaction that shareholders have on the return on investment made by managers (Judge and Zeithaml, 1992). On the other hand, managers are expected to implement strategic decisions that are in alignment with the interests of shareholders if there are adequate monitoring, remuneration and compensation for the work that they perform (Liu and Fong, 2010). Marashdeh (2014), states that the factors that can critically affect the performance of the firm include board size, CEO duality, ownership structure such as large shareholders and managerial ownership (Marashdeh,

2014). Since the success of capital budgeting decision contributes to the overall performance of companies it is unclear whether the above-stated factors can have an impact on the capital budgeting decisions taken by the firms in Ghana especially since no research has been conducted in that respect. Due to the impact capital budgeting can have on firm performance, consideration must be given to the context of corporate governance and the capital budgeting systems of companies. These considerations must also be given to the allocation procedures of funds and the project appraisal techniques used and how they might benefit the firm (Pike, 1986).

To highlight the fact that corporate governance can be studied in relation to capital budgeting, Black et al. (2006) argue that the value of corporate governance is valued differently by the insiders and outsiders. For example, the accounting based measures of performance (ROA and ROE) concern control of the wealth effects of corporate governance mechanisms from the viewpoint of the company management (Black et al., 2006). Capital budgeting is a function of financial management where the function of the financial manager is to increase shareholders' wealth. Myers (2001) proposed that perhaps the value of the firm depends on how its assets, cash flows and growth opportunities are utilized. Kolb (1968) also outlines that the existing theory on capital budgeting must call for estimations in the cost of carrying a capital budgeting project, the cost of capital to the firm and finally the basis for approval of the project based on the benefits of the projects that exceeds the cost of capital (Kolb, 1968).

2.5 Conclusion

The underlying conclusion from all of these related studies determines that corporate governance is not a remote organism in corporations. There are various factors that determine a governance system and to produce desirable results individual factors cannot be practiced in isolation. Attention must be given to factors stated above. There are theories that study the techniques of project appraisal and how it affects firm performance but there is none that looks at the outcome of capital budgeting projects in relation to the influence that corporate governance may have on these projects. This creates a literary gap for researchers in investigating capital budgeting outcomes from the standpoint of the corporation and its composition, especially in the African Context.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter discusses extensively the methods used by other researchers in similar studies and presents a framework by which data will be analyzed. The absence of this study makes the variables of measure for the independent variable subject to variables used in studies of firm performance and according to what the theory for this study dictates. This chapter seeks to provide a detailed description of the research design, the sampling strategy, data collection and intended data analysis process.

3.2 Research Design

This study is an exploratory research that used quantitative methods to analyze the relationships between variables of corporate governance and the outcome of investing or capital budgeting decisions, The regression for this research was modeled around Abor (2007) which is $Y_{it} = \alpha_{it} + \beta X_{it} + \epsilon_{it}$ the subscript i denoting the cross-sectional dimension and t representing the time-series dimension. The left-hand variable Y_{it} represents the dependent variable in the model (Abor, 2007). This model will allow for a comprehensive coverage of data over the five-year period (2011 to 2015). The independent variables however in this research are Firm Size, Board Size, Board Independence, CEO duality, Size of Audit Committee and Independence of Audit Committee (Abor, 2007), (Kyereboah-Coleman, 2008). These variables were derived from the “Theory of Separation of Ownership and Control” and from similar studies that suggest that the variables stated above may have relationship with decision-making in organizations.

Three panel regressions were separately conducted on 19 companies, the 10 local companies only and the 9 multinationals only. According to William (1970), majority of firms employ Return on Investment (ROI) to evaluate performance of investment projects. This is because ROI gives a better post audit measure of the project success (Rosenblatt, 1980), (Mukherjee and Henderson, 1987). Hence the dependent variable is the Return on Investment.

3.3 Research Scope

Under the scope of the research the independent and dependent variables used for the research are defined as follows:

- The board size refers to the number of appointed directors, who monitor the operations of managers in the interest of shareholders. “Organizational theory presupposes that larger groups take relatively longer time to make decisions and, therefore, more input time” (Steiner, 1972). The argument is that large boards are less effective and are easier for a CEO to control. There is also high cost of coordination and processing problems and this makes decision-making difficult (Kyereboah-Coleman, 2008).
- Board independence refers to the number of Non-Executive Directors who are on the board. John and Senbet (1998) argue that a board is more independent if it has more non-executive directors (NEDs).
- CEO duality refers to the board leadership structure in terms of whether the CEO is the same as the chairman or not (Marashdeh, 2014). The theory of agency supports the separation of CEO duties from chairmanship to increase board

independence from management. This potentially has a positive impact on firm performance which includes the capital budgeting decisions that firms make (Adams et al., 2005; Arosa et al., 2012).

- Firm size refers to the scope of operations of a firm. According to Lee, (2015) the smaller the firm, the more influence institutional investors and majority shareholders have over management decision and are able to get access to private information through negotiations with management. Firm size is also included to allow an adequate analysis of regression under multinational and local companies.
- The Audit Committee according to Kyereboah-Coleman (2008), represent the internal governance mechanism responsible for improving financial management and firm performance. The size of the Audit Committee is measured by the number of members and its independence is the ratio of non-executive directors to the size of the committee.

3.3.1 Study Population

The population of this study is all companies operating in Ghana; those listed and those not listed on the Ghana Stock Exchange.

3.4 Sampling Techniques

The main sampling technique used was the Convenience sampling. Convenience sampling allows companies to be selected based on the availability of information of companies. Companies with full details of their corporate governance background over the period of 2011 to 2015 were selected for this study because it allows an easy and reliable access to data for the purpose of analysis.

3.4.1 Sample Sizes

The sample of 19 companies as stated earlier was further divided into 10 local companies and 9 multinational companies to examine the various governance factors affecting the outcome of capital budgeting decisions. Each set of these two companies differs in size and sector of operation. Table 1 is a summary of firm distribution by sector and size.

Table 1

Firm Distribution by Sector and Size					
	Services	Mining	Industrial	Manufacturing	Total
Local	7	0	1	2	10
Multinational	5	3	0	1	9
Total	12	3	1	3	19

The sample size is also a mix of listed and unlisted companies to prevent the implication that the Security and Exchange Commission Ghana (SEC)' guidelines on corporate governance measures for listed companies might have on the final results. Table 2 presents sample firm by its listing status and size.

Table 2

Firm Distribution by its Listing Status and Size			
	Listed	Unlisted	Total
Local	6	4	10
Multinational	6	3	9
Total	12	7	19

3.5 Data Collection

The financial statements of companies were the primary source from which data was obtained. All documents such as the governance reports of companies were also among the sources from which data was collected.

3.5.1 Data preparation, Collation and Processing

Data were organized in Microsoft excel according to the companies and the years so that the relationship between the cross-sectional data and the years was clearly seen. This allowed a panel regression to be easily run on the variables. Panel analysis is data intensive and requires a thorough organization of the data from the various financial statements to achieve an accurate regression result. The regressions were run in Stata and Microsoft-Excel software.

3.6 Data Analysis

The econometric model selected was the multiple regression as data collected has multidimensional features.

Table 3

Test of Model

$$\text{ROI (Compname, t)} = \text{Xb} + \text{u}(\text{compname}) + \text{e}(\text{compname, t})$$

Estimated Results:

	Var	sd=sqrt(Var)
ROI	0.2216668	0.47082
e	0.0576248	0.24005
u	0.0430142	0,2073986

Test: Var (u) = 0

$$\text{Chibar 2 (01)} = 3.90$$

$$\text{Prob} > \text{chibar2} = 0.0242$$

In testing the accuracy of the model used in this study, the Breusch and Pagan Multiplier test is used. The null hypothesis states that there is no heterogeneity. From table 3 above, P value of the test which is 0.0242 is less than 0.05 and as such, the null hypothesis is rejected. This shows that the individual regressors are heterogeneous, meaning the samples used have different characteristics. This proves that the Robust Standard Error must be used to correct for the effect of heteroskedasticity and make the error term constant.

Hence, the panel regression model as used by Abor (2007) is $Y_{it} = \alpha_{it} + \beta X_{it} + \epsilon_{it}$, was used (Abor, 2007). The model specific to this research with some modification is

$$ROI_{it} = \alpha_{it} + \beta_1 (NED)_{it} + \beta_2 (CD)_{it} + \beta_3 (SAC)_{it} + \beta_4 (IAC)_{it} + \beta_5 (FS)_{it} + \beta_6 (BS)_{it} + \epsilon$$

Where:

ROI_{it} = Return on Investment for firm i in time t

NED_{it} = Ratio of Non-Executive Directors to board size (measure of firm independence) for firm i in time t

CD_{it} = CEO duality (=1 if CEO is chairman, otherwise, 0) for firm i in time t

ACS_{it} = Size of audit committee for firm i in time t

IAC_{it} = Independence of audit Committee for firm i in time t

FS_{it} = Log of the book value of assets for firm i in time t

BS_{it} = Log of number of board members for firm i in time t

Table 4

Skewness / Kurtosis Tests for Normality

	obs	Pr (Skewness)	Pr(Kurtosis)	adj chi2 (2)	Prob>chi2
ROI	95	0.0000	0.0000		0.0000
Firm Size	95	0.2634	0.2352	2.74	0.2547
Board Size	95	0.0064	0.0133	11.37	0.0034
Board Independence	95	0.0095	0.8957	6.33	0.0423
CEO Duality	95	0	0.00000		0.0000
Size of Audit Committee	95	0.1047	0.0153	7.65	0.0218
Independence of Audit Committee	95	0.0000	0.4394	16.92	0.0002

Source: Author's Estimate

Table 4 above shows the results for the Jarque Berra test for normality. The null hypothesis for this test states that data is normally distributed. With a significance level of 5% and Firm Size serving as a control variable, the null hypothesis was rejected for all independent variables. This means the independent variable were not normally distributed. As such, the log forms of some of the variables were taken to make them log-normal.

3.7 Validity and Reliability

To test the validity and reliability, the Hausman Test was conducted and the result showed that the Fixed Effects model should be used in the analysis of results for all 19 companies and the 9 multinational companies only. However, the Random Effect model was used in interpreting results for the 10 local companies only. Breusch and Pagan Multiplier test was used to confirm that the Least Ordinary Squares (OLS) regression

cannot be used for the analysis. Also the Robust Standard Error was used to correct for heteroscedastic residuals.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents and discusses the findings from the data collected and analyzed.

The first section of this chapter gives an overview of the characteristics of the sample by way of descriptive statistics. The second section presents in detail the findings from the regression analysis conducted on the various measures of corporate governance and ROI. The third section relates the regression results with the initial hypotheses and fourth and final section relates the findings in the second section to the review of literature in chapter two.

4.2 Characteristics of sample companies

Return on Investment (ROI) measures the loss or gain generated from an investment made by a company. In this case, Return on Investment is used to measure the outcome of investing decisions made by sample companies over the course of five years (2011 to 2015). As an accounting profitability measure, it is best desired for firms to obtain an ROI of 0.15 and above over the course of a year. The table below gives a descriptive summary of the ROI of sample companies.

Table 5

Descriptive statistics for ROI

Descriptive Statistics	All companies	Local	Multinationals
	ROI	ROI	ROI
Mean	0.084917137	0.13113988	0.033558533
Standard Error	0.047270387	0.089257917	0.010283283
Median	0.035911704	0.035494261	0.035911704
Standard Deviation	0.460734743	0.631148784	0.068982359
Sample Variance	0.212276504	0.398348787	0.004758566
Kurtosis	90.59254147	48.68630586	4.375722672
Skewness	9.412312833	6.93817851	-1.339007867
Range	4.701477872	4.553294282	0.414039539
Minimum	-0.223998848	-0.075815257	-0.223998848
Maximum	4.477479025	4.477479025	0.190040691
Count	95	50	45

From table 5, all firms had a short term investing profitability ranging from 4.47 to a negative 0.22 which shows a very wide statistical spread between the measures presented. A return on investment of 0.084 represents the mean for all 19 firms. The average spread from the ROI is 0.46. This shows a very random set of measures and is an indication of the varied investment profitability of the sample companies over the five year period (2011-2015). The above summary statistics also indicates that the data on ROI is not normally distributed as skewness is 9.41. The data is right skewed because the mean is greater than the median.

The mean ROI for local companies as compared to multinational companies is greater with a difference of 0.09. The mean ROI for local companies also show a relatively higher investment profit than multinationals. With the desired ROI being 0.15 and above, local companies show a considerably good mean ROI of 0.13 with multinationals having as low as 0.03 mean ROI.

The ranges between the ROI for both sets of companies provide an interesting observation. For local companies, the ROI ranges from -0.08 to as high as 4.47 while multinationals provide returns ranging from as low as -0.22 to a comparatively low maximum value of 0.19 ROI.

The spread from the mean for local companies is as wide as 0.63 when the average ROI is only 0.13. The ROI data for multinationals provides something different. The spread of investment returns from the mean of 0.03 is only 0.06. This shows that the investment returns (ROI) do not vary much from one another for multinational companies but varies greatly for local companies.

4.3 Descriptive Statistics for Governance Factors

Table 6

Summary Statistics for Corporate Governance factors

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROI	95	0.084917	0.460734	-0.224	4.477
Firm Size	95	1	7	6.1964	5
Board Size	95	8.978567	0.816157	8	10.60
Board Independence	95	0.952873	0.123311	0.4771	1.204
CEO Duality	95	1	9	2	1
Size of Audit Committee	95	0.624607	0.217177		0.923
Independence of Audit Committee	95	7	6	0	1
	95	0.010526	0.102597	0	1
Size of Audit Committee	91	3.362637	1.329298	0	7
Independence of Audit Committee	95	0.767944	0.366762	0	1
	95	9	5	0	1

Source: Authors' Estimate

Table 6 above is a summary of the individual characteristics of the variables used for the multiple regression. The firm sizes from the table are not highly dispersed as the minimum and maximum are 6.196477 and 10.60345 respectively. The deviation from the mean is also of 0.816. This observation may imply that the difference between the size of multinational firms and local firms may not be significant. The mean log of board size is 0.9528731 with a maximum of 1.20412 and again there is no wide dispersion of the board size numbers as the standard deviation is only 0.4771213. In the sample, the mean board independence is 0.62 indicating that many of sample companies have more Non-Executive Directors (NEDs) on their board. The spread from the mean for board independence is 0.217177. Also, most of these boards have the position of their CEO

separated from their chairmanship. The average numbers of members on the audit committee from the sample are a minimum of 3 and a maximum of 7 individuals. Some companies did not have an audit committee at all representing the number 0 in the table above. A similar situation is occurring for the independence of the audit committees which is meant to represent the number of Non-Executive Directors who are representing on the audit committees. Like board Independence, the independence of NEDs on audit committees show a high mean of 0.77 with a very low spread of 0.366 from the mean. This indicates that many of the sample firms had a large number of NEDs representing on their audit committee.

Table 7

Correlation Matrix of coefficients of regression model

	Firm Size	Board Size	Board Independence	CEO Duality	Size of Audit Committee	Independence of Audit Committee	Constant
Firm Size	1						
Board Size	-0.0017	1					
Board Independence	-0.1386	-0.0641	1				
CEO Duality	0.1538	0.3406	0.241	1			
Size of Audit Committee	-0.03202	-0.3111	0.0373	-0.0493	1		
Independence of Audit Committee	0.1599	0.399	-0.1862	0.0304	-0.4904	1	
Constant	-0.07423	-0.06119	-0.0283	-0.3851	0.3292	-0.428	1

Table 7 above provides a summary of the correlation between the various independent variables. Most independent variables have a weak positive relationship with each other. The relationship matrix ranges from a high of 0.3990 representing Board Size and Independence of Audit Committee to a low of 0.0304 representing CEO Duality and Independence of Audit Committee. The negative correlations between the Independent variables are also not so significant. The weakest negative correlation is between Board Size and Firm Size, a -0.0017 indicating that the size of the Board for Ghana companies is irrelevant to the size of the firm. The strongest negative correlation, however, is between the Size of Audit Committee and the Independence of Audit Committee representing -0.4909 as shown Table 7.

4.4 Regression Results

4.4.1 Test of Heteroskedasticity

One of the key assumptions of regression is that the variance of the errors is constant across observations. The Breusch and Pagan Multiplier test is used to test for heteroskedasticity. Appendix 1, shows the table for the results of the test where the Null Hypothesis states that there is homoskedasticity. The P value of the test which is 0.0242 is less than 0.05 and as such, the Null Hypothesis is rejected. This proves that there is heteroskedasticity present in the residuals. As such, the Robust Standard Error, model is used in the analysis of data. This is to correct for the effect of heteroskedasticity.

4.4.2 Random and Fixed Effect Models

Appendix 2 shows the Hausman test for random and fixed effect. The hypothesis on the result for the test of random and fixed effects states that the difference in the coefficients of random and fixed effects is not systematic. The results show that the null hypothesis should be rejected. The implication is that the random effects model cannot be used, hence the results of the fixed effects model in table 6 is analyzed. The fixed effect model controls for the effects of time invariant and time variant variables.

Table 8

Regression Result for 19 Sample Companies

ROI	Coef	Robust std. Err.	t	p> t	95% Conf. Interval)	
Firm Size	-1.093003	0.2534149	-4.31	0	-1.62541	-0.5606
Board Size	0.8326259	0.4763676	1.75	0.098	-0.16819	1.833437
Board Independence	0.556929	0.4150122	1.34	0.196	-0.31498	1.42887
CEO Duality	-1.050796	0.4260511	-2.47	0.024	-1.9459	-0.1557
Size of Audit Committee	0.0421387	0.0408566	1.03	0.316	-0.0437	0.127975
Independence of Audit Committee	-0.0032596	0.4629837	-0.01	0.994	-0.0976	0.969433
Constant	8.662832	2.119902	4.09	0.001	4.209082	13.11658
sigma_u	0.78503338					
sigma_e	0.24005165					
Rho	0.91449087					

Source: Author's Estimate

4.4.3 Interpretation of Regression Results

Based on the results from all 19 companies from Table 8 above, Board Size, Board Independence, Size of Audit Committee and Independence of the Audit Committee have P values that are greater than 0.05 and are as such not significant. However, statistically, the factors used in the regression are also significant since they have a both negative and positive relationship with the dependent variables. However, Size of Audit Committee and Independence of Audit Committee economically insignificant variables with coefficients as low as 0.0421387 and -0.0032596 respectively. Firm Size, CEO Duality and Independence of the Audit Committee have negative relationship with ROI, the dependent variable holding all other variables constant. However, the Board Size, Board Independence and Size of the Audit Committee have positive relationships with the dependent variable ROI.

Based on the initial hypotheses in Chapter 1, the Null Hypotheses for Firm Size, CEO Duality, Board Size, Board Independence and Size of the Audit Committee are rejected. Conversely, the Null Hypothesis is not rejected for Independence of the Audit Committee. The implication is that in the case of all 19 companies, the “Theory of Separation of Ownership and Control” by Fama and Jensen (1983) applies to Firm Size, CEO Duality, Board Size, Board Independence and Size of the Audit Committee.

The P value for the entire regression is 0.000 and is less than 0.05; hence the null hypothesis (**H₀**) which states that Corporate Governance has no significance on the outcome of investing decisions is rejected.

The result here implies that generally, the independent variables which represent corporate governance factors have a positive relationship on the outcome of investing decisions taken by Ghanaian firms.

4.4.4 Results for Individual Local and Multinational Companies

The regression in Appendix 3 represents the regression results for local companies. The coefficients of the governance factors show statistically significant variables. For local companies, Board Size, Board Independence and Independence of the Audit Committee had a positive relationship with ROI. Per the initial hypotheses in Chapter 1, The Null Hypotheses of the above mentioned governance factors are rejected. The inference from the theory of this study is that for local companies an adequate Board Size will result in effective investing decision making. Also, a good representation of NEDs on the Board of Directors and Audit Committee will also have a positive direct effect on the outcome of investment decisions.

However, regression results as shown in appendix 4 for multinational companies show that Firm Size, Size of the Audit Committee and the Independence of the Audit Committee has a positive relationship with ROI. Though Firm Size is serving as a control variable, results show that value of the larger plays an important role in determining whether an investing decision is successful or not. From Chapter 1, the Null hypotheses for Size of Audit Committee and Independence of the Audit Committee will be rejected. This means that a sufficient number of internal directors available to audit investment decisions and a good representation of NEDs on the Audit Committee have a

corresponding positive effect on the outcome of investment decisions for Multinational Companies.

4.4.5 Discussion of findings and literature

Table 9

Summary of Regression Results

Independent Variable (Corporate Governance Measures)	Relationship with Dependent variable (Return on Investment)		
	All 19 Companies	10 Local Companies	9 Multinational Companies
Firm size	Negative and Significant	Negative and Significant	Positive and Insignificant
Board Size	Positive and Insignificant	Positive and Insignificant	Negative and Insignificant
Independence of the Board	Positive and Insignificant	Positive and Insignificant	Negative and Significant
CEO Duality	Negative and Significant	Negative and Insignificant	Omitted
Size of Audit Committee	Positive and Insignificant	Negative and Insignificant	Positive and Significant
Independence of Audit Committee	Negative and Insignificant	Positive and Insignificant	Positive and Significant

Source: Authors' Estimate

According to this study, in Ghana, there was a positive relationship between the outcome of investing decisions and Board Size and Board Independence and Size of Audit Committee for Ghanaian Companies as represented in table 6. Due to the absence of empirical governance studies that discuss investing decisions, the literary backing of findings in this section is based on firm performance.

The positive relationship between firm performance and Board Size was echoed by Kyereboah-Coleman and Biekpe (2005) and Mak and Yuanto (2003) in their findings in firms listed in Singapore and Malaysia when they found that firm valuation is highest when the board of directors has a minimum of five, a number considered relatively large in developing markets. In a Nigerian study, Sanda et al (2003) found that firm performance was positively related with small, as opposed to large boards. From this research board sizes ranged from 3 to 16, a range close to the 3 to 13 range used by Kyereboah-Coleman and Biekpe (2008), in their study of firm performance and governance in Ghana. Their findings, therefore, supports the positive relationship obtained for Board Size in this study.

CEO Duality has a negative relationship with firm performance according to Kyereboah-Coleman (2008) study on Ghanaian firms. This study provided similar negative results. The best practice is to separate board chair from CEO position (Kyereboah-Coleman, 2008). “The negative relationship connotes that when the same person holds the positions of board chair and CEO, it results in conflict of interest and increases agency” (Kyereboah-Coleman, 2008), (Klein et al, 2005). From “Theory of Separation of Ownership and Control (Fama and Jensen, 1983), it can be inferred that the authors

support a thorough separation of all functions and heads relating to ownership, directorship and management.

Fiador (2016), whose similar study was solely on Ghanaian Listed companies using the governance index of Ghana as independent variable revealed that for firms operating in Ghana, one of the most significant corporate governance factors that affect overall performance is the size of the firm, Likewise, Pike, (1987), stated that the size of a company was also known to influence the capital budgeting process and the firm's performance as a whole. Though, Firm Size is the control variable measuring the size of multinational and local companies, the asset worth of the company may have an influence on overall investing decisions explaining the significant but negative relationship it has on ROI. Storey (1990), explains that all firms face an identical U-shaped cost curve and as such small firm sizes will experience a faster growth (profitability) than larger firms.

Coles et al (2008) concluded in their study that a positive and significant relationship exists between Board Size and ROI in complex firms. This study showed Board Size present a positive relationship but not a significant study which is in line with the theory of this study. Studies by Jensen (1993), Gertner and Kaplan (1996), Yermack (1996), Mak and Kusnadi (2005) have all drawn negative conclusions for Board Size. A study by Eisenberg et al, (1998) concluded that many firms that showed a negative relationship with ROI were firms with large board sizes but does not necessarily mean that smaller boards are better performing. As such conclusion of empirical literature on Board Size is inconclusive.

Many studies such as those by (Drakos and Berkiris, 2010), (Bhagat and Black, 2000) and (Klein, 1998) found that the independence of the board does not affect the performance of the firm. However, the results obtained in this study showed that Board Independence has a positive relationship with ROI. However, Hassan Che Haat et al, (2008) assert in their study that having more outside independent directors on the board improves firm performance. Klein et al (2005) also argued that there is an importance in looking beyond board composition with emphasis on non-executive director representation.

The results of the Audit Committee (size and independence) also reported non-significant variables per the results of this study but only the Size of the Audit Committee showed a positive relationship with ROI. Kyereboah-Coleman (2008) also suggested that having an independent Audit Committee should be able to improve performance. Owusu (2012) study which found a positive and significant relationship with the Audit Committee Index in his study was consistent with the result of this study. Klein et al. (2005) also supported the view that certain elements of corporate governance appear to have a stronger effect on performance than others depending on the organization in question.

4.4.6 Conclusion

Klapper and Love (2004) in their dissertation stated that many factors of corporate governance are relevant but not all of them are significant and this is proven true as per the regression results in table 8, as three out of five non-significant factors have a positive relationship with ROI. Also only three out of six factors had a positive direct relationship with ROI and they are Board Size, Board Independence and Size of Audit Committee.

After classifying sample companies according to their sizes, both local and multinational companies presented three out of six factors having a positive relationship with the measure of the outcome of investment decisions (ROI). Independence of the Audit Committee run through the two sets of companies as a positively related factor.

CHAPTER 5: CONCLUSIONS

5.1 Introduction

This chapter addresses the research problem for the study and summarizes the results that have been obtained and discussed in chapter 4. This concluding chapter is further divided into sections; conclusion, recommendation, suggested further research and the overall limitation of the study. This final chapter also addresses the objectives as stated in Chapter 1 and iterates the significance of this study.

5.2 Summary of Results

It is concluded that corporate governance does have significance on the outcome of investing decisions made by Ghanaian Companies. From Chapter 4's analysis, Board Size, Independence of the Board and the Size of the Audit Committee have positive relationships with the outcome of investing decisions. Hence, these are factors firms in Ghana must consider carefully when taking investing decisions. This conclusion therefore, addresses the first and initial research objective of Chapter 1. That is; to determine if there is a relationship between the factors of corporate governance and the outcome of capital budgeting decisions companies take.

For Multinationals, it is concluded that importance must be placed on the Firm Size (worth of company), the Size of Audit Committees and the number of NEDs on their Audit Committees. For multinationals the structure, size etc. of the factors mentioned above are critical if they are to make an effective investment decision.

For local companies, attention must be given to the Board Size, the Independence of the Board and the Independence of the Audit Committee when making investing decisions.

The implication is that the better the function and structures of the above mentioned factors, the better investing decision local companies make. The second and third paragraphs of the summary of results section address the second objective of this research. That is to examine the different factors of corporate governance that may influence the outcome of investing decision multinationals and local companies make.

The relevance of this study thus demonstrates that Corporate Governance cannot be overlooked in making investing decisions. Based on the analysis of this study and the summary of results, some governance factors have positive and a direct effect on the outcome of investing decisions made. The implications for Ghanaian companies is that to be able to reap benefits on the investment projects they invested in, governance systems must be well structured according to the theory of this study.

As previous studies have shown that financing decisions in Ghana are can be affected by poor governance, this study shows the outcome of investing decisions can be also be severely affected by a poor governance. Ghanaian Firms will make good corporate decisions once a governance structure that separates ownership from management and from control is in place as per the “Theory of Separation of Ownership and Control” by Fama and Jensen (1983), with the appropriate structure to each of these factors. Investing decisions overall increases the internal competitiveness of firms and eventually contributes to overall firm performance when sound financing decisions have been made as well.

5.3 Recommendations

These recommendations are based on the variables that showed a negative relationship with the dependent variable Return on Investment (ROI).

5.3.1 Recommendation 1

It is also important for Ghanaian companies to keep the position of Chairmanship and Management distinct from each other. Since the chairman has the greatest influence over the actions of the board, the separation of decision making and decision control is compromised when the chairman of the board is also the CEO of the firm and this intensifies the issue of agency related problems (Abor, 2007).

5.3.2 Recommendation 2

For companies whose operations extend beyond Ghana, it is recommended that the number of NEDs on their Boards (Audit and Board of Directors) be larger in proportion to the number of directors on the board. They can contribute to decision making that represents the views of investors and other external stakeholders, a key dynamic in ensuring short-run profitability. Owusu (2012) recommends that the Audit Committee should comprise of a minimum of three directors with the majority being independent NEDs.

5.4 Further Research

Further Research on governance and investing decisions can be done by further categorizing the Ghanaian companies according to their industry of operations like

research study did by categorizing companies based on the size of companies. The table in the methodology section has the breakdown of companies according to their industry of operation which can be probed into further. This may be important in discovering factors that are relevant in making short run investing decisions based on sectorial findings.

Also, future research should seek to include the Tobin Q's measures as part of corporate governance measures in investigating the outcome on investing decisions. This is because companies do not operate in isolation; they exist under a macro-economic umbrella whose activities could have rippling effects on the investment conditions of companies. An inclusion of the Tobin Q's may provide a broader insight into factors that affect investing decisions of companies.

5.5 Limitation

A total observation of 95 was used in this study as compared to other studies in Ghana that used larger observations. Owusu (2016) in his study on governance performance in Ghana had a total observation of 315 firms and Abor (2007) used a total of 110 observations in his governance- financing study. The ideal sample of companies should have been a minimum of 300 companies to get an accurate 5% error level and confidence level of 95%. This situation may have undermined some aspects on the results obtained in the study.

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APPENDICES

Appendix 1

Breusch and Pagan Multiplier Test for Random Effects

$$\text{ROI}(\text{Compname}, t) = Xb + u(\text{compname}) + e(\text{compname}, t)$$

Estimated Results:

	Var	sd=sqrt(Var)
ROI	0.221667	0.4708161
e	0.057625	0.2400516
u	0.043014	0,2073986

Test: Var (u) = 0

Chibar2 (01) =

3.90

Prob > chibar2 = 0.0242

Appendix 2

Hausman Test

	(b) fe	(B) Re	(b-B) Difference	sqrt(diag(V_b-V-B))
Firm Size	-1.093	-0.60357	-0.4894335	0
Board Size	0.832626	0.418062	0.41456367	0
Board Independence	0.556929	0.409003	0.1479256	0.2331195
CEO Duality	-1.0508	-0.56186	-0.4889372	0
Size of Audit Committee	0.042139	0.072979	-0.0308398	0
Independence of Audit Committee	-0.00033	-0.02267	0.02233944	0.3054189

b = constant under Ho and Ha; obtained from xtreg

B = inconstant under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$\chi^2(6) = (b-B) (V_b - V_B)^{-1} (b-B)$

3274.54

Appendix 3

Regression Results for Local Companies

ROI	Coef.	Robust Std. Err.	z	P> z	(95% Conf. Interval	
Firm Size	-1.107926	0.2652826	-4.18	0	-1.627871	-0.587982
Board Size	1.149671	0.9430292	1.22	0.223	0.69866326	2.997974
Board Independence	0.4165816	0.6353029	0.66	0.512	-0.8285892	1.661752
CEO Duality	-1.091131	0.630912	-1.71	0.087	-2.341767	0.159505
Size of Audit Committee Independence of audit Committee	-1.005682	0.0637983	-0.09	0.929	-0.1307241	0.1193604
Constant	8.142017	2.364202	3.44	0.001	3.508265	12.77577

Appendix 4

Regression Results for Multinational Companies

ROI	Coef.	Robust Std. Err.	z	P> z	(95% Conf. Interval)	
Firm Size	0.0027013	0.005253	0.51	0.607	-0.0075945	0.0129971
Board Size	-0.074418	0.0486939	-1.53	0.126	-0.1698559	0.0210207
Board Independence	-0.046236	0.0140399	-3.29	0.001	-0.737537	-0.018718
CEO Duality	0	(omitted)				
Size of Audit Committee	0.0140734	0.0034439	4.09	0	0.0073234	0.0208233
Independence of audit Committee	0.0696828	0.0159565	4.37	0	0.0384087	0.1009569
Constant	-0.00833	0.0328531	-0.25	0.8	-0.0727211	0.0560609